NanoTechLabs
Bigger innovations through smaller materials
www.nanotechlabs.com

Sealants, Composites, EMI shielding

Nanotubes and high aspect ratio materials

Locations in
Yadkinville, NC and Kettering, OH

• Small business
• Veteran Owned

Oil drilling chemicals
NTL Nanotechnology

Nanoplastics

Buckypaper

Custom Nanomaterials
We make our own nanotubes

- NTL grows high aspect ratio multi-walled carbon nanotubes and at its headquarters in NC
- 10-50 nm in diameter and 5µm to 5mm long depending on the application
- M-grade MWNTs (50nm x 900um) retail for $11/gram for bulk production
We do our own compounding

- Twin screw compounding
- Centrifugal blending
- Solvent blending
We make our own buckypaper
Nanoplastics

NanoTechLabs is scaling the process to prepare highly conductive nanotube-filled-polymers for EMI shielding and other applications using standard engineering polymers, including: *thermoplastics*, *thermosets* and *elastomers*.

**Advantages**
- Low loading required for percolation
- Extremely lightweight
- Retains toughness and flexibility of the original polymer
- Fabrication of “metal-free” systems
- Bulk electrical resistance as low as 0.1 ohm-cm

**Potential Applications**
- Electromagnetic interference protection
- Electrostatic discharge materials
- Electrostatic paint substrates
- Lightweight thermal management materials
- Conductive gasket (elastomers)
Polyurethane Data

**SE measurement (dB)**

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**Delcom (Ω/sq)**

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• NTL opened Ohio division Buckeye Composites in January 2009
• Located in the National Composite Center
• BuckyShield™ manufacturing and application development
• NTL and NCC have collaborated on buckypaper development and leveraged multiple programs for technology transition
Carbon Nanomembrane – “Buckypaper”

- Custom buckypaper development
  - Carbon nanotubes
  - Carbon nanofiber
  - Nanoscale graphene platelets
  - Thickness, areal weight tailor-able
- Continuous production
  - 12” wide
  - Up to 345 linear feet
  - 0.5 – 2 linear fpm
- Applications
  - EMI Shielding
  - Lightning Strike Protection
  - Thermal Management

Buckeye Composites ● 2000 Composite Dr. ● Kettering, OH 45420 ● (937) 297-9518
Eliminate Metallic Shielding for Composite Structures

- Thermal, electrical, and shielding property enhancement
- Reduced Weight
- Improved repairability and manufacturability
- Commercial and aerospace applications
  - Thermal Management
  - EMI Shielding
  - Lightning Strike Protection
NTSports Venture

ALL CAUGHT ON OUR
ONYX
7’ 3” MEDIUM LIGHT SPINNING RODS ON
6 LB. TEST LINE

409 W. Maple St. ● Yadkinville, NC 27055 ● (336) 849-7474
Custom Nanomaterials

NTL grows high conductivity multi-walled carbon nanotubes (MWNT) and other custom nanomaterials at its headquarters in NC.

- MWNTs 10-30 nm in diameter and 5µm to 5mm long depending on the application
- DWNTs with a narrow diameter distribution (~2.7nm)
- Silver and Gold nanowires
- Boron Nitride nanotubes
Thank You

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Questions?